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CHAPTER 11 - CONTRACT QUALITY ASSURANCE PROGRAM

11.1 INTRODUCTION

This chapter establishes the basic provisions for the Contract Quality Assurance Program (CQAP) for hardware and technical data in accordance with DoD and NAVSEA policy. The chapter includes provisions for tailoring the implementation of these programs to the particular need, based on contractual requirements, of each SUPSHIP activity.

This chapter covers all CQAP requirements for new construction, repair, and overhaul contracts assigned to a SUPSHIP. It applies to all nuclear and non-nuclear areas, except as otherwise indicated.

11.1.1 Quality Assurance (QA) Directives

NAVSEA instructions, directives, and policy letters not included in this chapter but which contain mandatory QA requirements will be incorporated into each SUPSHIP's CQAP.

11.1.2 NAVSEA Evaluations

NAVSEA will, as considered necessary, conduct product oriented evaluations of a SUPSHIP and associated contractors. The purpose of these evaluations is to determine compliance to technical requirements, contractor conformance to specification requirements and process controls, and SUPSHIP conformance to QA functions and responsibilities.

11.1.3 Glossary of QA Terms

A glossary of QA terms is provided in Appendix 11-A.

11.2 PROGRAM DIRECTION AND CONTROL

11.2.1 Purpose

This section describes the Quality Assurance oversight requirements for a contract administration program. This program applies to all Government QA actions by SUPSHIP personnel. The policy described herein encompasses the policy established by the FAR 46.0 and Acquisition Reform Initiatives.

Acquisition Reform is a new way of doing business and should be embraced by all activities. Acquisition Reform requires a major cultural change with less reliance on end item inspections and more emphasis on process control and improvements. Transition from reliance on end item inspection can only be accomplished as processes are defined, mapped and found to produce a product that consistently meets contractual requirements. Activities should strive to eliminate the adversarial relationships between Government and contractors and are encouraged to foster an environment of increased teamwork and cooperation within the Government and Industry.

11.2.2 Contractor Responsibilities

The contractor carries out the obligations as set forth in the terms and conditions of the contract and in the applicable specifications. The contractor is responsible for controlling product quality, offering to the

Government for acceptance only those supplies and services that conform to contract requirements and, when required, for maintaining and furnishing objective evidence of this conformance.

11.2.3 SUPSHIP Responsibilities

SUPSHIP will determine the type and extent of government Contract Quality Assurance (CQA) actions required, based upon the particular procurement. These actions will include as a minimum:

- Inspection of the product/process;
- Review of the contractor's quality system or of any other means employed by the contractor to control quality and to comply with contract requirements;
- Teaming with the contractor to establish and improve quality systems and processes;
- Maintenance of Government records to reflect:
  - The nature of all SUPSHIP CQA actions, including the number of observations/inspections made and the number and type of nonconformities detected;
  - Corrective Action Requests initiated;
- Review and evaluation of quality information including reports from the user to initiate required corrective actions or to adjust Government CQA actions; and
- Final acceptance of product, when required.

The SUPSHIP determines if the contractor's performance of work complies with the requirements of the contract. The contractual documents must provide the authority to require the contractor to maintain a quality system adequate for the work. The contractor must provide and maintain a quality system acceptable to the Government "as specified in the contractual documents." To implement this, cognizant SUPSHIP personnel will determine the effectiveness of the contractor's quality effort, as well as perform the product inspections necessary to ensure contractor's conformance to the specification. Product quality will result from the work process and cannot be “inspected” into the product.

SUPSHIP personnel should partner with the contractor to resolve quality issues and improve quality processes. However, SUPSHIP personnel will not serve as a replacement for the contractor's own quality system. Nor should SUPSHIP personnel be used by the contractor as a progressive inspection device to determine end product acceptability.

If the product is not ready for inspection after Government services have been requested or items are found to be nonconforming during Government inspection, the SUPSHIP representative will notify the contractor that contractual requirements have not been met. In addition, the SUPSHIP representative may discontinue verification actions and initiate a Corrective Action Request (CAR) Appendix 11-B, identifying some of the specific nonconformities and stating that the contractor is not ready for Government inspection.

While evaluating the contractor's performance of work on a specific product, the SUPSHIP representative should require that the contractor only meet those requirements set forth in the contractual documents. The SUPSHIP representative will not require higher quality work than that set forth in the specifications, to do so would provide the contractor with grounds for requesting an increase in price to cover the higher costs of performance. Similarly, the SUPSHIP representative will not accept lower quality work or work of a lesser scope than specified in the contractual documents. Work performed will only be accepted when the work conforms to the contractual documents and changes.

11.2.3.1 Specification Review for Repair Contracts

SHAPEC Planning Activities (SPA), Executing Activities, SUPSHIPs and contractors prepare and issue work specifications. SPA will review these work specifications for adequate quality requirements and inclusion of all technical requirements before issuing each Invitation for Bid (IFB) or Request for Proposal (RFP). Additionally the Executing Activity will randomly perform the above review. Modifications or sequences that are written to the original work specifications will also be reviewed for adequate quality and technical requirements.

Specification review will include, as a minimum:

- The location of (I), (V) and (G) points are consistent with the procedure referenced in Appendix 4E of SOM Chapter 4;
- There is adequate, written description of the technical requirements;
- Accept or reject criteria for inspections and tests is clearly stated and includes appropriate tolerances;
- The use of references in work specifications should be avoided unless the material is too extensive to quote or paraphrase; and
- That an (I), (V) and (G) point is not invoked in the work specification before a paragraph which references a NAVSEA Standard Item which invokes the same (I), (V) and (G) points.

SUPSHIP will establish and maintain a feedback and corrective action process that formally reports specification problems and nonconformities to the preparing SUPSHIP and/or contractor activity.

11.2.3.2 Internal Quality Audits

Internal quality audits are conducted to determine compliance by SUPSHIP departments with quality related directives. These audits are optional and, when authorized by SUPSHIP management or higher authority, will be coordinated between the QA department and the Command Evaluation and Review Program to preclude overlap or duplication of effort.

11.2.3.3 Retention and Disposal of Inspection Records

Unless otherwise stated in applicable directives, inspection records such as CARs and Product Verification Inspection (PVI) records will be retained and disposed of in accordance with SECNAVINST 5212.5. Microfilm or ADP systems may be used to store inspection records.

- Retain all inspection records for a period of six years after the delivery of each ship or craft in the contract. The first three years of retention will be in an inactive file that is readily accessible. For the remaining three years, inspection records may be transferred to a Federal Records Reserve Center or archive site which provides rapid retrieval.
- Following the total six years retention period, inspection records may be disposed of unless legal action is pending with contractors for which these records pertain.

11.2.3.4 Personnel Capability Requirements

SUPSHIP is responsible for determining needed personnel requirements, initiating action necessary to obtain the required personnel, and providing training necessary to ensure the skills are available for the performance of QA functions.

The SUPSHIP will ensure that the required skills are available to determine acceptability of products produced and services rendered by the contractor. SUPSHIP must provide training that ensures personnel have the skills, techniques, and knowledge necessary to comply with the requirements of this chapter. QA training opportunities must be extended to all appropriate personnel engaged in performing quality related functions. A training plan will be established and maintained current.

Personnel performing quality related functions must satisfactorily complete the following training as a minimum (optional for auditors and lead auditors):

- Introduction/overview of International Standards Organization (ISO) 9001.
  - May be SUPSHIP internally prepared by an experienced auditor.

Personnel performing quality audits of the contractor must satisfactorily complete the following training as a minimum (optional for lead auditors):

- ISO 9001 Internal Auditing.
  - Formal Registrar Accreditation Board (RAB) registered training or equivalent (trained by lead auditor).

Personnel assigned as Lead Auditor/Audit Team Leader must satisfactorily complete the following training as a minimum:

- ISO 9001 Lead Auditor training (40 hours).
  - Formal RAB registered training.
  - Individual auditor certification by the RAB is optional.

Specialized training and certification in Coating Inspection is required for each individual performing verification of contractor coating processes on critical surfaces. Training and certification must be accomplished through a NAVSEA approved course (e.g. NACE Session 1, NBPI; recertification for NACE is five years and for NBPI is four years). Requirements for critical surfaces are defined in NAVAL SHIPS TECHNICAL MANUAL S9086-VD-STM-030-CHAPTER 631.

Specialized training and certification in Oxygen Cleanliness is required for each individual performing verification of contractor cleaning, assembly, or packaging of certified oxygen clean systems and components. Training and certification must be administered by a NAVSEA approved Certified Oxygen Clean Instructor in accordance with MIL-STD-1330. Recertification of personnel is required every three years.

Personnel performing inspection or acceptance of electrical cableway work on navy ships shall be trained and qualified to NAVSEAINST 9304.1C.

11.2.3.5 Nondestructive Test Personnel Requirements

Specialized training, experience, and certification in Nondestructive Testing (NDT) is required for each individual performing verification of contractor's NDT. Portsmouth NSY can provide specialized training for all SUPSHIP personnel, and is designated as the certification activity for all SUPSHIP Level III personnel to be certified in accordance with NAVSEA Technical Publication T9074-AS-GIB-010/271 and NAVSEA

0900-LP-001-7000. The training at Portsmouth NSY is not a requirement; only Level III certification by Portsmouth is required. Training programs may be developed by the SUPSHIP office or attained locally from Navy technical schools, NSYs, chapters of the American Society for Nondestructive Testing, or from private industry. Experience required as a prerequisite for NDT certification can be obtained by actual experience in the method or by performance of procedure evaluation or process quality audits of a contractor's inspection functions in the applicable NDT method.

NDT qualifications are:

- NDT LEVEL II (Inspector): An NDT Level II individual will be qualified to set up and calibrate equipment and to interpret and evaluate results with respect to applicable codes, standards, and specifications. The NDT Level II individual shall be thoroughly familiar with the scope and limitations of the methods for which the individual is qualified, prepare written instructions, and document/report NDT results.

- NDT LEVEL III (Examiner): An NDT Level III individual will be capable of establishing techniques and procedures; interpreting codes, standards, specifications, and procedures; and designing the particular test methods, techniques, and procedures to be used. The NDT Level III individual will be responsible for the NDT operations for which qualified and to which assigned and will be capable of interpreting and evaluating results in terms of existing codes, standards, and specifications. The NDT Level III individual will have sufficient practical background in applicable materials, fabrication, and product technology to establish techniques and to assist in establishing acceptance criteria where none are otherwise available. The NDT Level III individual will have general familiarity with other appropriate NDT methods and will be qualified to train and examine Level II personnel for certification.

Portsmouth Naval Shipyard will certify SUPSHIP NDT Level III (Examiner) and can certify Level II (Inspector) personnel in any or all of the following methods:

- VT Inspection
- MT Inspection
- PT Inspection
- RT Inspection (Structural, Castings and Piping)
- UT Inspection (Welds, Thickness, and Silver Braze; Level II personnel may obtain individual certifications)
- UT Inspection (Special Purpose Lead; Level II certification only)
- ET Inspection (Welds and Base Material)

Note that SUPSHIP activities requesting Level III Examiner certification must provide evidence to the certifying activity as to the need to function at this level and that facilities and equipment are available.

11.2.3.5.1 Recertification and Maintenance of Certification for NDT Personnel

NDT Level III (Examiner) personnel are to recertify at the intervals specified in NAVSEAINST 4355.7. NDT Level II (Inspector) personnel will recertify and perform documented verification of use of the applicable NDT method at intervals specified in Technical Publication T9074-AS-GIB-010/271. The required periodic maintenance of certification for Level II (Inspector) personnel may consist of actual performance of the applicable NDT method, or by performance of a documented PR, PE, or PVI in the applicable NDT method.

11.2.3.5.2 Nuclear NDT Qualifications

SUPSHIP personnel performing Nuclear NDT Level III (Examiner) duties are to be certified/recertified as specified in NAVSEAINST 4355.7. Nuclear NDT Level II (Inspector) personnel are to be certified/recertified by the SUPSHIP activity's Nuclear NDT Level III (Examiner) in accordance with NAVSEA 250-1500-1 and NSTR-99.

11.2.4 SUPSHIP/Ship's Force Quality Assurance Interface

Although SUPSHIP is the authority for acceptance of accomplished work in accordance with the contractual agreement, the Commanding Officer/Prospective Commanding Officer must be satisfied that the work performed on the ship is satisfactory. The Commanding Officer will normally assign members of the Ship's Force to inspect work performed on the ship. If a ship's inspector is dissatisfied with the quality of the contractor's work on an individual item, the ship's inspector will not attempt to require contractor personnel to redo or otherwise amend the work performed. Rather, the ship's inspector will relay the findings to the cognizant SUPSHIP representative who will then take appropriate action. Ship's Force inspectors should also participate in conferences held to determine progress of work and to discuss any problems with quality of the work or services provided to the ship.

In addition, Ship's Force personnel may be provided training and/or assigned QA functions under the cognizance of SUPSHIP in accordance with a Memorandum of Understanding (MOU) negotiated between SUPSHIP and the Commanding Officer of the ship. A Typical format for the SUPSHIP/SHIP'S FORCE MOU is identified in Volume II, Chapter 3, of the Joint Fleet Maintenance Manual (JFMM).

11.3 SURVEYS AND CONFERENCES

11.3.1 General

This section identifies some of the surveys and conferences that may be conducted prior to and after contract award.

11.3.2 Bidders' Conference (Repair)

When held, a bidders' conference provides an opportunity for discussion of the contract quality requirements to ensure all bidders understand the extent and level of QA required.

11.3.3 Pre-Award Surveys

Prior to the award of a contract, the prospective contractor may be evaluated for quality organization, practices, procedures, and history to determine capability for the type of work for which the contractor is being considered. In addition, the scope of the pre-award survey will include a discussion of the contractual QA requirements to confirm the contractor's understanding of these requirements and how the contractor intends to implement the requirements. The QA participant in the pre-award survey is a member of the overall survey team headed by the team coordinator. When possible, the survey will be a joint team effort. When this is not possible, QA actions will be coordinated with the team coordinator. The QA report and recommendations are considered by the Pre-award Survey Review Board in making the ultimate

recommendation to the Procuring Contracting Officer (PCO) who considers the recommendation in award of the contract.

11.3.4 Post-Award Conference

When it is determined after contract award that the contractor does not or may not have a clear understanding of the scope of the contract, the technical requirements, or the rights and obligations of the parties, the Administrative Contracting Officer (ACO) must initiate post-award orientation action to clarify contract requirements and resolve misunderstandings. Any element of Executing Activity/SUPSHIP, the PCO, or technical representative of the PCO may initiate a request to the ACO for a conference. A conference of all Government participants should be held before conferring with the contractor to ensure that the Government position on all matters is established.

11.3.5 Arrival Conference (Repair)

An Arrival Conference must be held to discuss the conduct of the repair availability and the interface between ship's force, contractor, and SUPSHIP personnel and the responsibilities and interface of each in performing quality related functions.

11.4 CONTRACT QUALITY ASSURANCE PROGRAM (CQAP)

11.4.1 General

A CQAP will be established and implemented to ensure that the contractor delivers products that fully conform to contract requirements. This section describes the elements of CQA actions that are designed to provide a systematic program for ensuring contractor compliance with contract requirements.

11.4.2 Elements of the CQAP

The program, based on the deliverable product and contractual requirements, will include a minimum of seven basic elements. These elements are:

- Planning;
- Document Review;
- Procedures Evaluation;
- Product Verification Inspection;
- Quality Audit;
- Corrective Action; and
- Quality Data Evaluation.

11.4.3 Responsibilities

SUPSHIP will develop, apply, and maintain an effective program for performing Government QA actions consistent with the CQAP. Coordination and cooperation between the various internal SUPSHIP functional areas are essential to the success of the program and provides SUPSHIP with the necessary confidence for ensuring acceptance of quality products. The SUPSHIP QA program will be described by detailed operating procedures that provide SUPSHIP personnel with specific direction in applying the provisions of this chapter to the local contracting environment.

11.5 PLANNING

11.5.1 General

Planning the actions required to determine the contractors compliance with the contract requirements will be systematic and consider the contractual requirements and relative importance of the product. The objective of this planning is to take into account all the factors involved in deciding how SUPSHIP personnel can most effectively and economically perform the CQAP function.

Based on the analysis of quality data, SUPSHIPs are encouraged to transition from traditional PE and PVI to quality system audits, process quality audits, and product quality audits during CQAP development.

11.5.2 Planning of the Application of the CQAP Elements

CQA planning will be documented, systematic and must define all SUPSHIP required CQA actions. As a minimum, the planning for all products will include:

- Appropriate distribution of SUPSHIP effort between inspection of products and evaluation of the contractor's quality system;
- Provisions for review of the contract package including specifications and related documents to determine completeness, continuity, and responsibilities for ensuring contractor's performance of technical and quality requirements;
- Provisions for development of a QA plan for each contract/availability. For repair the plan shall identify test, inspections, (G) points and process control procedures (PCPs) required by the specifications
- Provisions for the review and/or approval of contractor's written procedures and technical data to ensure adequacy and timely release of the procedures;
- Provisions for the evaluation of the contractor's written procedures to ensure the contractor accomplishes the intended purpose of controlling product quality;
- Provisions for the development of detailed PVI checklists and for the actual inspection or verification of products to determine conformance to the requirements of the contract;
- Provisions for applying corrective action when a breakdown or other inadequacy is noted in the contractor's quality program;
- Provisions for invoking Government Source Inspection (GSI) at subcontractor's facilities;
- Provisions for the collection, evaluation, and use of quality data;

- Provisions for accomplishing quality audits;
- Provisions for reviewing pre-award survey and post-award conference results; and
- Provisions for review of the contractor's quality history.

11.6 DOCUMENT REVIEW

11.6.1 General

Document Review is the CQAP element for verifying that the contractor's documented procedures and technical data comply with contractual requirements.

11.6.2 Procedure Review (PR) Criteria

When a contractual requirement exists for a contractor to develop written procedures, SUPSHIP will identify those procedures necessary for review based on the degree of risk. Each identified procedure will be reviewed for conformance to the administrative and technical requirements contained in the contract. The SUPSHIP representative must review the contractor's procedures in a timely manner and not delay the contractor's contract performance. This review may be accomplished in increments, is not limited to newly developed procedures, and includes subsequent revisions and changes. When the contractor does not develop required written procedures or fails to correct inadequate procedures previously reported to the contractor, SUPSHIP will initiate corrective action.

11.6.3 Technical Data Review Criteria

Data review and evaluation will be performed on all deliverable technical data when required by CDRL. Review of technical data means the detailed examination or review with the application of engineering judgment by engineers or technicians to determine if the data content and format conform to contract requirements. Technical data not requiring Government approval may be reviewed on a selected or sampling basis. The SUPSHIP may use any local means of selecting characteristics or attributes of this technical data.

SUPSHIP approved technical manuals will have a Technical Manual Identification Request completed and forwarded to Naval Sea Data Support Activity (NSDSA) for approval and technical number assignment according to NAVSEAINST 4160.3.

11.6.4 Acceptance of the Contractor's Documented Quality System (Repair)

The collection of documents describing the contractor's policy and methods of implementing the specific requirements of NAVSEA SI 009-04 constitutes the contractor's documented quality system. SUPSHIP will promptly conduct an adequacy review and furnish the contractor written notice of the acceptability of the documented quality system (QA manual).

11.6.5 Approval of Procedures

Approval of the written quality procedures will be based on full compliance with the contract provisions. Approval of the procedures will only be given when specified in the CDRL, DD Form 1423, or contract specifications. The contractor will be notified promptly on approval/disapproval of the written procedure.

11.6.6 Documentation

Documentation for Documentation Review will include:

- The identification number and title of the document(s), revision date, date reviewed, acceptability or unacceptability, and the name of the individual who accomplished the review;
- Developed Checklists for PE(s); and
- PE Schedule

11.7 PROCEDURES EVALUATION (PE)

11.7.1 General

PE is the CQAP element for verifying that the contractor is complying with the written quality procedures and that the procedures are accomplishing the intended purpose of controlling product quality. PE's should be conducted utilizing the QA plan, checklists or attribute system developed and validated by the SUPSHIP representative. PE is to be accomplished as early as possible and periodically throughout the performance of work to confirm the sufficiency and adequacy of the quality procedures in operation.

SUPSHIPs are encouraged to transition from traditional PEs to process quality audits.

11.7.2 Initial Evaluation

Evaluation of new or revised contractor quality procedures should be conducted at the time of the contractor's initial use of the procedure. Evaluations should include sufficient inspections of the contractor's operations described by the procedure to ensure compliance with contract requirements.

11.7.3 Continued Evaluation

When the length of the contract permits, continuing evaluations of all applicable procedures should be scheduled and conducted after the initial evaluation. When a continued evaluation of a procedure indicates that the contractor is maintaining satisfactory control of quality, the frequency of evaluation may be reduced. When continued evaluation of a procedure indicates the contractor is not maintaining control of quality, appropriate corrective action should be taken and the frequency of evaluation should be increased.

11.7.4 Documentation

Documentation should include:

- PE results including observations and nonconformities

11.8 PRODUCT VERIFICATION INSPECTION (PVI)

11.8.1 General

PVI is the CQAP element which verifies that the product offered by the contractor to the Government for acceptance conforms to contract requirements. PVI is accomplished by the cognizant SUPSHIP representative by physical examination, verification, testing, concurrent witnessing, or monitoring of all aspects of the repair, overhaul, or ship construction process.

Based on the analysis of quality data, SUPSHIPs are encouraged to transition from traditional PVIs to product quality audits with the exception of mandatory inspections/government notification (G) points.

11.8.2 Conduct of PVI

PVI's should be conducted utilizing the QA plan, checklists or attribute system developed and validated by the SUPSHIP representative. During the development of checklists or attribute lists, SUPSHIPs shall include mandatory inspection points, government notification points, critical inspection points and those areas that may be concealed from further inspection.

* When mandatory inspections/government notification (G) points are not performed/witnessed, the reason why (e.g. confidence in the contractor's inspection, overtime not authorized, inadequate manpower, etc.) shall be documented.

Flexibility for adjustments in the frequency of inspections will depend on nonconformity rates and problem areas that develop. As a prerequisite to SUPSHIP inspection or verification actions, the following steps should be taken:

- Determine the availability and currency of contractor's written procedure;
- Determine the specification/technical requirements;
- Determine the currency of calibration of contractor's measuring and test equipment; and
- Determine the adequacy of contractor's inspection records.

Concurrent verification of contractor inspection or test actions should be conducted as follows:

- As the contractor performs the inspection, witness the examination or test;
- Independent of the contractor, read or use the contractor's measuring/test equipment to determine if the product conforms to the requirements; and
- Observe whether the contractor accurately records the inspection or test results.

11.8.3 Documentation

Documentation should include PVI results including observations/inspections and nonconformities.

11.9 QUALITY AUDIT

11.9.1 General

Quality audit is the CQAP element that examines and evaluates products, processes, services, systems, and elements thereof. Such audits are referred to as “quality system audit”, “process quality audit”, and “product quality audit”. Quality audits are conducted to determine the effectiveness of the quality system, analysis of the process, or assessment of product conformance.

11.9.2 Audit Periodicity

SUPSHIP audits of the contractor quality system (quality system audit) will be conducted annually, as a minimum, to determine the effectiveness of the quality system. The quality system audit may be conducted as a single audit or may be a combination of several audits provided the entire quality system is audited annually. Follow up audits will be conducted to verify and record implementation and effectiveness of any corrective action noted.

Process quality audits and product quality audits may be performed to examine and evaluate any process, function, or entity based on local needs and conditions. These other audits may be routine, or may be prompted by significant changes in the contractor’s quality system, process, product quality, or by a need to follow up corrective action.

NOTE: SUPSHIPs are encouraged to transition to process and product quality audits with the objective of less emphasis on end item inspections and more emphasis on process control and improvements. Transition from reliance on end item inspection can only be accomplished as processes are defined, mapped, and found to produce a product that consistently meets contract requirements. Activities should strive to eliminate the adversarial relationships between Government and contractors and are encouraged to foster an environment of increased teamwork and cooperation within the Government and Industry.

11.9.3 Documentation

Documentation should include:

- Audit schedule, including the identification of the lead auditor/team leader; and
- Audit reports including results/resolutions and follow-up actions.

11.10 CORRECTIVE ACTION

11.10.1 General

Corrective action is the CQAP element that defines the methods for requesting the contractor to act to correct nonconformities. To achieve systematic assurance of compliance throughout all phases of the contractor's operation, the basic causes of nonconformities must be identified and the contractor must initiate prompt corrective action to correct assignable conditions that have resulted in generating nonconformities. The correction of the nonconformity alone does not satisfy this goal. Corrective action as described in this section employs the "closed loop" concept (i.e., appropriate measures must be taken to identify the cause and prevent the recurrence of nonconformities).

Any breakdown in the contractor's quality system requires action by SUPSHIP to ensure that product quality is not compromised. The extent of this action depends on the frequency and significance of the nonconformity and the contractor's quality history. The contractor will be required not only to correct specific nonconformities but also to initiate preventive action to eliminate causes of nonconformities. SUPSHIP must determine the effectiveness of the contractor's action and will also determine the necessity for tighter control until ensured that the contractor's corrective action is satisfactory. For repair contracts, a percentage of progress calculations should be withheld on the affected work item until the contractor has taken satisfactory corrective action.

In addition to the below Corrective Action Request, a Trouble Report shall also be prepared and distributed in accordance with NAVSEAINST 4700.17 for all significant problems encountered in the construction, repair, and maintenance of Naval ships. Significant problems are those that affect ship safety, cause significant damage to the ship or its equipment, delay ship deployment or incur substantial cost increase, or involve severe personnel injury. Trouble Reports should also identify systemic problems and issues that constitute significant lessons learned for other activities.

11.10.2 Corrective Action Requests (CAR)

When corrective action by the contractor is required, one of the following methods will be requested:

11.10.2.1 Minor Nonconformities (Method A)

Minor nonconformities shall be presented to responsible contractor's personnel verbally or in writing for correction. Each minor nonconformity will be described in sufficient detail to allow the contractor to understand what contractual requirement is violated and to take appropriate corrective action. SUPSHIP representatives should not require contractor written response, however, the internal SUPSHIP process shall ensure that minor nonconformities are documented and corrected.

11.10.2.2 Major Nonconformities (Method B)

When major nonconformities are detected or a trend of recurring minor nonconformities are noted, a CAR will be initiated citing the specific contract, specification, or contractor’s procedural requirement and a description of the nonconformity, clearly indicating how the contract, specification, or contractor’s procedural requirement was violated. Additionally, the CAR shall include contract number/job order, ship, appropriate references, originator’s signature, unique serial number, contractor’s corrective action response (including elimination of causes to prevent recurrence), and the SUPSHIPs indication of acceptability and signature. Appendix 11-B provides an example of a CAR form that may be used. The CAR should be forwarded to the appropriate level of the contractor's management for action. The actual time frame for completion of contractor corrective action may vary; however, prompt response to CARs is required. An interim reply may be acceptable, pending contractor's completion of corrective actions.

11.10.2.3 Systemic Nonconformities

11.10.2.3.1 Method C

When the previous methods fail to obtain satisfactory results or when the severity of the situation warrants, a letter shall be issued from the Quality Assurance Officer/Director/Manager or the appropriate department head notifying the contractor's appropriate level of management that a serious quality problem exists and immediate management action must be taken to comply with the provisions of the contract. An electronic or hard copy of each Method C letter shall be furnished to the SUPSHIP contract department.

11.10.2.3.2 Method D

When a Method C letter fails to obtain satisfactory results or when the severity of the situation warrants, a Method D letter shall be issued by the SUPSHIP Commanding Officer or the Contracting Officer notifying the contractor's top level of management that a serious quality problem exists and immediate management action must be taken to comply with the provisions of the contract. An electronic or hard copy of each Method D letter shall be furnished to the SUPSHIP contract department.

11.10.3 Requesting Corrective Action

CARs should be discussed with the contractor before issuance. An effective follow-up system will be maintained on all CARs to ensure acceptable resolution. CARs will be used for requesting correction of quality-related nonconformities. The CAR may also be used to request correction of non-quality related nonconformities (e.g., safety and environmental) provided the CARs can be readily segregated.

11.10.4 Documentation

Documentation of the corrective action element will include:

- Records of all Trouble Reports
- Records of all CARs; and
- Status of all CARs.

11.11 QUALITY DATA AND EVALUATION

11.11.1 General

Quality data is the CQAP element that provides for the collection, evaluation, and use of contractor, SUPSHIP, NAVSEALOGCEN and customer quality data. Operating procedures within SUPSHIP will be established to describe the system to be used for collecting, evaluating, maintaining, and using the data.

11.11.2 Quality Data

Quality data may include:

- Inspection and test results;
- Reports;
- Surveys;
- Audits;
- CASREPS;
- CARs;

- Product Quality Deficiency Report
- PR, PE, and PVI results.
- Trouble Reports; and
- Critiques

11.11.3 Data Evaluation

SUPSHIP will evaluate the quality data individually or collectively at established periodic intervals for the purpose of:

- Adjusting the intensity of application of basic elements of the CQAP;
- Providing a basis for transitioning from traditional PE and PVI to quality system audits, process quality audits and product quality audits;
- Providing a basis for acceptance or rejection of products or services;
- Providing a basis for acceptability of a contractor's quality system and written procedures;
- Notifying CAOs and Purchasing Offices of significant quality issues;
- Determining effectiveness of contractor's quality system;
- Providing a basis for recommending process improvement initiatives to the contractor; and
- Providing a basis for decisions related to the reallocation of personnel.

11.11.4 Documentation

Documentation will include:

Quarterly Report indicating quality data evaluation results.

11.12 GOVERNMENT CQA ACTIONS AT SOURCE

11.12.1 General

The prime contractor is responsible for controlling the quality of materials, items, and services provided by its subcontractors. Government contract quality assurance on subcontracted supplies or services shall be performed only when required in the Government's interest. The primary purpose is to assist SUPSHIP in determining if the prime contractor is ensuring the conformance of subcontracted supplies or services with contract requirements. Government CQA at source, commonly referred to as Government Source Inspection (GSI), does not relieve the prime contractor of any responsibilities of the contract and GSI does not establish a contractual relationship between the Government and the subcontractor. SUPSHIP requests for GSI shall be held to a minimum based on quality performance history maintained by the NAVSEALOGCEN/SUPSHIP and the GSI criteria, paragraph 11.12.3.1.

11.12.2 Exception

This part does not apply to procurements under the technical cognizance of the Deputy Commander, Nuclear Power Directorate, NAVSEA 08. NAVSEAINST 9210.31 provides guidance for procurement of products under NAVSEA 08 cognizance.

11.12.3 Requesting CQA at Source

SUPSHIP will establish a process for invoking Government Source Inspection (GSI) on subcontracted supplies and for preparation and issue of CQA instructions to the DCMA Contract Management Office (CMO). SUPSHIP may elect to use prime contractor source inspection in lieu of those aspects normally requiring government oversight provided the prime contractor performs each aspect of the inspection to be verified by the government. When source inspection is used in lieu of GSI the SUPSHIP shall have alternative evaluation methods (e.g., process evaluation, audits, quality data evaluation, etc.) to ensure conformance of subcontracted products or services with contractual requirements.

11.12.3.1 GSI Criteria

Government inspection during contract performance is essential. Complex items have quality characteristics, not wholly visible in the end item, for which contractual conformance must be established progressively through precise measurements, tests, and controls applied during purchasing, manufacturing, performance, assembly, and functional operation either as an individual item or in conjunction with other items. GSI is to be invoked based on the criteria:

- Mandatory CQA actions imposed on the Supervisor that can be accomplished only at the subcontractor's location;
- Performance at any other place would require uneconomical disassembly, destructive testing or special required instruments, gauges, or facilities are available only at the subcontractor location;
- Performance at any other place would destroy or require the replacement of costly special packing and packaging;
- Considerable loss would result from the manufacture and shipment of unacceptable supplies, or from the delay in making necessary corrections;
- Government inspection during contract performance is essential;
- Supplies requiring inspection are destined for points of embarkation for oversees shipment;
- The contract specifies that certain quality assurance functions, which can be performed only at the subcontractor’s plant, are to be performed by the Government;
- A (G) POINT (see NAVSEA Standard Item 009-04) is invoked in purchase orders for inspections and tests to be performed which are outside a 50 mile radius of the Contractor's plant;
- It is determined for other reasons to be in the Government’s interest, Supplies or services for which certificates, records, reports, or similar evidence of quality must be at the subcontractor location; or
- The item is to be shipped from the subcontractor’s plant to the using activity and inspection at source is required.

11.12.3.2 Purchase Order Clause

When subcontract GSI actions are determined to be necessary, the prime contractor will be requested to add the following Government notification and access clause to the purchase order:

- *"Government inspection is required prior to shipment from your plant. Upon receipt of this order, promptly notify and furnish a copy to the Government representative who normally services your plant so that appropriate planning for Government inspection can be accomplished. In the event the Government representative or office cannot be located, our purchasing agent shall be notified immediately."*

11.12.3.3 Amending Subcontract After Release

When the decision to request Government CQA actions at subcontract level is made after the subcontract is released, the contractor will be requested to amend the subcontract to include the appropriate requirement for Government CQA action at source.

11.12.3.4 Letter of Delegation (LOD)

When a condition stated in SOM Chapter 11.12.3.1 exists, an LOD (Appendix 11-C, or similar) will be prepared. The SUPSHIP representative will define the necessary CQA actions to be taken and the documentation to be provided by the Government representative at the subcontractor's plant. Defined actions should indicate specific quality characteristics, processes or procedures to be verified, tests to be witnessed, sampling plans to be used, or records, reports, and certifications to be evaluated.

All oral and written statements and contract terms and conditions relating to Government quality assurance actions at the subcontractor level shall be worded so as not to:

- Affect the contractual relationship between the prime contractor and the Government, or between the prime contractor and the subcontractor;

- Establish a contractual relationship between the Government and the subcontractor; or

- Constitute a waiver of the Government's right to accept or reject the supplies or services.

11.12.3.5 Distribution of LODs

The LOD, with copies of the purchase order, will be furnished to the cognizant CAO, as designated in DLAH 4105.4, DoD Directory of CAS Components, and to the Government representative at the subcontractor's facility. The requirement that the CAO acknowledge receipt of delegation, by returning a receipted copy of DCMA "ACKNOWLEDGMENT" will be included with the LOD. Changes to the purchasing document will be processed similarly.

11.12.3.6 LOD Follow-up System

SUPSHIP will maintain a follow-up system to ensure that the LOD was received, that the DCMA component will perform the inspection as stated, notification of the completion of all CQA actions have been completed, and that copies of the DCMA records will be provided or a certificate will be furnished stating that records are on file. Direct communications between SUPSHIP and the DCMA component is encouraged.

11.13 PRODUCT DATA REPORTING AND EVALUATION PROGRAM (PDREP)

11.13.1 General

All nonconformities identified during the receipt inspection of Government Furnished Material or Contractor Furnished Material that had GSI invoked shall be reported in accordance with the requirements of SECNAVINST 4855.3A, Product Data Reporting and Evaluation Program. Shipbuilders and Ship Repair facilities shall be encouraged to participate in the Product Data Reporting and Evaluation Program. SUPSHIP will provide liaison services between the contractor and NAVSEALOGCEN Detachment Portsmouth.

APPENDIX 11-A

QUALITY ASSURANCE GLOSSARY

Attribute
A characteristic or property which is used to determine acceptability or unacceptability with respect to a given requirement.

Certification
The procedure and action by a duly authorized body of determining, verifying, and attesting in writing to the qualifications of personnel, processes, procedures, or items in accordance with applicable requirements.

Characteristic
A physical, chemical, visual, functional, or any other identifiable property that helps differentiate between items of a given sample or population. The difference may be either quantitative (by variables) or qualitative (by attributes).

Corrective Action
An action taken to correct a specific nonconformance by repair, rework, replacement, or a change in requirements and the elimination of the causes to prevent recurrence

Corrective Action Request (CAR)
Any request to the contractor for the correction of a non-conformance.

Deviation
Written authorization granted prior to the manufacture of an item, to depart from a particular performance or design requirement of a specification, or referenced document, for a specific number of units or specific period of time.

Document
A medium and the information recorded on it that generally has permanence and can be read by a person or machine.

Entity
An object, tangible or intangible, that can be individually described and considered. An entity could be a product, process, person, activity, machine, service, system, department, company, institution, or organization.

(G) Point
A symbol inserted in a Work Item to establish a point in the sequence of accomplishment of work at which time the SUPERVISOR shall be notified to permit observation of a specific inspection or test by the government.

(I) Point
A symbol inserted in a Work Item to establish a point in the sequence of accomplishment of work at which time the contractor shall inspect/verify and document the inspection or test. (I) inspections require verification by a separate individual, other than the person who has accomplished the work, qualified as an inspector.

Inspection
The act of measuring, examining, testing, gauging or otherwise comparing of supplies or services with requirements to determine conformity.

Inspection Record
Recorded data concerning inspection results.

International Organization for Standardization (ISO)
A worldwide federation of national standards bodies.

Lead Auditor/Team Leader
A person who is qualified to perform and designated to lead/manage a quality audit team.

Major Nonconformity (Method B)
A nonconformance that judgment and experience indicate could impair the performance or life of the product and/or result in hazardous or unsafe conditions for the user.

Minor Nonconformity (Method A)
A nonconformance or flaw that will probably not impair the performance or life of a product, nor result in unsafe conditions for the user.

NAVSEA Standard Item (SI)
Those items written to describe procedures and general requirements for the performance of work to be accomplished under the job order. SIs are approved by the Chairman (SSRAC) acting on the advice provided by the Committee and cognizant NAVSEA codes. SI numbers are assigned in an 009-XX series.

Nonconformance
A departure of a quality characteristic from its intended level or state that occurs with a severity sufficient to cause an associated product or service not to meet a specification requirement.

Objective Quality Evidence (OQE)
Any statement of fact, either quantitative or qualitative, pertaining to quality of a product or service based on observations, measurements, or tests that can be verified.

Observation
An action that occurs when one attribute is verified to one unit of product.

Preventive Action
An action taken to eliminate the causes of a potential nonconformity, or other undesirable situation, to prevent occurrence.

Process
A set of interrelated resources and activities that transform inputs into outputs with the aim of adding value.

Process Quality Audit
An analysis of elements of a process and appraisal of completeness, correctness of conditions, and probable effectiveness.

Products
The results of activities or services; a generic term that denotes goods and/or services.

Product Quality Audit
A quantitative assessment of conformance to required product characteristics.

Quality
The composite of all features and characteristics of a product or service that bear on its ability to satisfy given needs.

Quality Assurance (QA)
A planned and systematic pattern of all actions necessary to provide adequate confidence that the product or service conforms to established technical requirements.

Quality Audit
A systematic and independent examination to determine whether quality activities and related results comply with planned arrangements and whether these arrangements are implemented effectively and are suitable to achieve objectives.

Quality Surveillance
The continuing monitoring and verification of the status of procedures, methods, conditions, products, processes, services, and analysis of records to ensure that specified requirements are being fulfilled.

Quality System
The organizational structure, responsibilities, procedures, processes, and resources for implementing quality management.

Quality System Audit
A documented activity performed to verify, by examination and evaluation of objective evidence, that applicable elements of the quality system are suitable and have been developed, documented, and effectively implemented in accordance with specified requirements.

Record
A document that contains objective evidence that shows activities performed or results achieved.

Specification
The document that prescribes the requirements with which the product or service has to conform.

Systemic Nonconformance (Method C or Method D)
A nonconformance related to system failures that require a high level of management action.

Testing
A means of determining the capability of an item to meet specified requirements by subjecting the item to a set of physical, chemical, environmental, or operational actions and conditions.

Unit of Product
An entity that can be inspected or verified, expressed in distinct or quantitative terms (e.g., 5 linear feet of weld).

(V) Point
A symbol inserted in a Work Item to establish a point in the sequence of accomplishment of work at which time the contractor shall inspect/verify and document the inspection or test. (V) inspections require verification by the trade supervisor, inspector, or qualified tradesperson.

Verification
The process of confirming by examination and provision of objective evidence that specified requirements have been fulfilled.

Waiver
A written authorization to use or release a quantity of material, components, or stores already manufactured but not conforming to the specified requirements

Work Items
Work Items are work specifications that are prepared to accomplish repair or alteration work in ship repair. These items must be locally reviewed for applicability, quality, and technical requirements and tailored to suit the specific work requirements.

Other terms and definitions are as listed in ISO 8402.

APPENDIX 11-B

(SUPSHIP LOGO HERE)

SUPSHIP (YOUR'S)
CORRECTIVE ACTION REQUEST

TO:	**FROM:** SUPERVISOR OF SHIPBUILDING CONVERSION AND REPAIR, USN (YOUR ADDRESS HERE)
SHIP/HULL NUMBER:	**REFERENCES:**
CONTRACT NUMBER:	
SERIAL NUMBER:	

STATEMENT OF NONCONFORMANCE (INCLUDE CONTRACT/SPECIFICATION REQUIREMENTS):

_____ _____
SIGNATURE OF SUPSHIP REPRESENTATIVE DATE ☐SEE ATTACHED

CONTRACTOR'S RESPONSE:

_____ _____
SIGNATURE OF CONTRACTOR REPRESENTATIVE DATE ☐ SEE ATTACHMENT

VERIFICATION AND EVALUATION OF REPLY: ☐SATISFACTORY ☐UNSATISFACTORY ☐ SEE ATTACHMENT
COMMENTS:

_____ _____
SIGNATURE OF SUPSHIP REPRESENTATIVE DATE ☐SEE ATTACHED

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APPENDIX 11-C
LETTER OF DELEGATION (Example)

From: _____ (Activity)
To: _____ (DCMA Component)

Subj: (Insert contract or purchase order number, vendor or subcontractor and address, as appropriate)

Encl: (1) Contract Quality Assurance Requirements Invoked on DCMA at Source
(2) DCMA "Acknowledgment" of Contract Quality Assurance Requirements Invoked
(3) Specifications, Contract, or Purchase Order (when required)

1. Enclosure (1) is forwarded for implementation by your activity on the subject contract or purchase order and is not intended to restrict any additional inspection requirements imposed by the QAR in accordance with DCMAD-1, Chapter 4.4, Supplier Quality Assurance.

2. Requests for reduction/elimination of any specific inspection requirements listed herein will be considered when supported by proper documentation attesting to the Contractor's control over the process. This documentation may include a copy of the QAR's surveillance program plan that details the method of DCMA verification, manner in which performed, and statistical method in which derived. Documentation should include (where appropriate/practicable) a flow chart of the process under consideration detailing product audit points and the results of the Contractor's/DCMA statistical analyses of the process which clearly indicates the process is under control and meeting specifications.

3. It is requested that enclosure (2) be completed by the QAR and returned to (appropriate Activity and Code) by the date specified therein. In this endeavor, the QAR is advised as follows:

a. Contact (appropriate Activity and Code) when inspection performance requested in enclosure (1) may result in additional costs or delayed delivery.

b. Promptly notify this office if any portion of this delegation cannot be accomplished.

c. Take exception to enclosure (1) when any specific inspection requirement listed therein meets the conditions of paragraph 2, listed above, with the supporting documentation.

4. It is requested that a copy of the QAR's inspection records, generated in accomplishing enclosure (1) inspections, be submitted to SUPSHIP with each shipment.

5. In lieu of a copy of the actual QAR's inspection records, this Activity will accept a statement similar to that specified below, submitted to this SUPSHIP with each shipment. When this method is elected this Activity reserves the right to request copies of specific records as needed and to review records during Activity's surveys.

Contract Quality Assurance requirements invoked by (appropriate Activity and Code) transmittal letter serial number _____ dated _____ on contract or purchase order number _____ and vendor or subcontractor _____ have been satisfactorily completed. The QAR's records will be maintained and available upon request.

QAR Signature _____ DCMA Code No. _____ Date _____

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CONTRACT QUALITY ASSURANCE REQUIREMENTS
INVOKED ON DCMA AT SOURCE

Contract Number: _____ Level: _____

Prime Contractor: _____ DCMA Loc: _____

Subcontractor: _____ DCMA Loc: _____

A. GENERAL INSTRUCTIONS:

The Product and Manufacturing Assurance surveillance plan is a prime requisite to assure successful completion of this contract. Assurance of the Contractor's compliance to contract quality requirements in conjunction with DCMAD-1 (one book) is required.

B. DEFINITIONS:

The words listed below are used throughout this delegation and defined herein to clarify intent to the QAR:

- Perform (physically accomplish tests and/or inspections);
- Witness (observe contractor's performance of tests and/or inspections); and
- Verify (by reviewing the Contractor's documented evidence of tests/inspections).

C. SPECIFIC INSTRUCTIONS:

The QAR is requested to maintain characteristic numbering as listed. Since only certain characteristics from the NAVSEA Master List are applicable to this contract, the numerical sequence may not be continuous. All correspondence should reference the numbers as listed below in order to assist this Activity to identify to overall program reporting.

Characteristics 1 through 4, although not required to be recorded on the QAR inspection records submitted, are highlighted here to alert the QAR to realize that they are an integral part of the overall control system and should be administered on each lot ready for shipment:

1. Documentation: The QAR shall verify that paperwork (software pertaining to the shipment) is complete in quantity and applicable to the procurement document and shipment.
2. Damage: The QAR shall perform inspection to ensure damage free condition of shipping containers or protective devices to prevent impairing or degrading the function or quality of the material.
3. Preservation, Packaging, Packing, and Marking: The QAR shall perform inspection to assure that preservation, packaging, packing, and marking of each shipment is in accordance with the procurement document.
4. Visual: The QAR shall perform visual inspection to assure the material displays an appearance of cleanliness and good workmanship.

Characteristics 5 through 25 will be identified (e.g., circled) as applicable to the purchase order. The characteristics identified will meet the requirements of the purchase order.

5. Material Identification: (perform/verify)
6. Material Verification Tests: (verify/witness)
7. Radiography: (verify/witness)
8. Magnetic Particle Test: (verify/witness)
9. Ultrasonic/Eddy Current Test: (verify/witness)
10. Liquid Penetrant Test: (verify/witness)
11. Operational or Functional Test: (witness)
12. Pressure Test: (witness)
13. Electrical/Electronic Test: (witness)
14. Missing, Wrong, or Improperly Assembled Parts: (perform)
15. Dimensions: (perform)
16. Welding: (verify/witness)
17. Brazing: (verify/witness)
18. Soldering: (verify/witness)
19. Finish: (perform)
20. Shelf Life: (verify/witness)
21. Contracted Technical Data: (verify/witness)
22. Mercury Free: (verify/witness)
23. Procedure Approval (Special Process): (verify/witness)
24. Manufacturing Process: (verify/witness)
25. Design Evaluation Tests: (witness)

DCMA ACKNOWLEDGMENT OF INVOKED CONTRACT QUALITY ASSURANCE REQUIREMENTS

Contract Quality Assurance (CQA) requirements per transmittal letter dated _____ have been received. The following action(s) will be taken:

(1) CQA requirements as specified will be performed.

(2) CQA requirements as specified will be performed with exceptions noted below.

(3) CQA requirements as specified cannot be performed for reasons explained below.

(4) QAR inspection records will be forwarded with each shipment per your transmittal letter.

QAR Signature _____ DCMA Code _____ Date _____

Contract Number _____ Vendor _____

Note: Addressees will check appropriate number(s), complete and return to:

Activity: _____

Location: _____

By Date: _____